NAPOLEON AT WATERLOO

Instruction Manual

KRENTEK SOFTWARE

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CREDITS

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Part I Basics

1) INTRODUCTION

NAPOLEON AT WATERLOO is a tactical military simulation of Napoleon Bonaparte's attempt to regain his position as Emperor of France after returning from exile in 1815. As Napoleon Bonaparte, use your joystick to maneuver the French Army across the battlefield of Waterloo, Belgium. The object is to defeat the Anglo-Allied forces (under British command) and their allies, the Prussians. Anything less than total victory will mean being banished from power once more.

2) LOADING THE PROGRAM

NOTE: Manual instructions are for the ATARI, with Commodore notes in parenthesis.

Turn on the disk drive. Insert the disk. Turn on the TV or monitor and the computer. The title page will appear while the program loads. (For the Commodore, type LOAD "NAW",8,1 then press RETURN. If this doesn't work on your model, type LOAD "BOOT",8 and press RETURN, then type RUN and press RETURN.)

3) SCENARIOS

After the title page, the menu page will appear, listing the four scenarios:

Prussians Retire

Historical

Grouchy Marches to the Guns

Prussians Evade Grouchy

These are arranged from least difficult to most difficult. You will probably want to begin with the first one. Press the OPTION button to choose the scenario. After you have selected a scenario, press the START button. The program will then finish loading. (For the Commodore, use f1 to choose the scenario and f7 to start loading the scenario.)

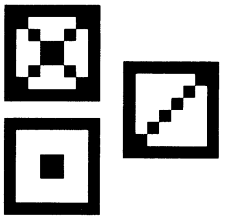
4) THE BATTLEFIELD

Once the program loads, you will see the center of the battlefield. Above the battlefield is the date, June 18,1815 and the current time. The game begins at 11:15 am and ends at 9:00 pm. Unless otherwise noted, all references to time will be as measured on the game clock rather than real time. At the bottom of the screen there is a prompt to press the START button (f1 function key on the Commodore), do this now. Your units, the French are the blue squares and are toward the bottom of the screen. The red squares toward the top of the screen represent the Anglo-Allied units. At the beginning of the game there are no Prussian units on the battlefield. When they appear they will be brown (green on the Commodore). In the center of the screen is a purple square. This is the cursor. It is used to move around the battlefield, examine the strength of various units and to give orders to your units.

To look at the rest of the battlefield, move the cursor by pushing the joystick. It can be moved up and down, side to side or diagonally. When it hits the edge of the screen, the map will move until you reach the edge of the map. The entire battlefield is approximately three times as large as the screen. Besides the combat units, there are several different terrain symbols on the map. On the ATARI, trees have green tops and brown trunks. Villages are represented by a cluster of small brown dots. The larger brown objects which form a rectangular shape are walled farms. Finally, running under the Anglo-Allied units is a long brown line. This represents the crest of a ridge, which the Anglo-Allied units occupy. (On the Commodore, the shapes are identical, but the colors are solid green.) To view the terrain symbol under a particular unit, move the cursor over the unit and press the fire button. Release the fire button when you want to move again. The effects of the different terrain symbols is discussed in the sections on movement and combat.

5) INSPECTING THE TROOPS

You have probably noticed that there are several types of unit symbols displayed. They represent the different types of units listed below:

SYMBOL	TYPE
	INFANTRY-foot soldiers
	CAVALRY-horse soldiers
	ARTILLERY-cannons

Note that the Anglo-Allies do not have artillery units.

You may also have noticed that pressing the fire button with the cursor over a unit causes information, called the unit display, to appear near the bottom of the screen. For French units, the particular Corps (an organizational grouping) that the unit belongs to is given, along with name of the commander of that unit. These are not particularly important to the game, but add to the historical flavor. On the second line, the number of soldiers or cannon (hereafter called guns) is listed. The cavalry units are designated as light or heavy (LT/HV). Notice that several French cavalry units also have guns. Finally, the morale of the unit is listed. The morale can vary from poor to high and affects how well the unit performs in combat.

For the Anglo-Allied side the organization and commander are not given. Instead, the nationality of the unit is listed. Among the countries fighting against the French the quality of soldiers varied considerably. On the second line, the number of soldiers and guns (although there are no Anglo-Allied artillery units, most of their infantry and cavalry units have several guns) are listed. The morale of the allied units is not displayed.

6) HOW TO GIVE ORDERS

Orders are given to the infantry and cavalry units in the same way. Artillery orders will be explained below. To give orders to a particular French unit, place the purple cursor over that unit. Press and hold the fire button. For units that do not have orders there will be a small light blue (white) X in the center of the cursor. Continue to hold the fire button and move the joystick. You will see a light blue cursor moving. The purple cursor will indicate where the unit is currently positioned. Place the light blue cursor in the position that you want the unit to move. Then release the fire button. At the bottom of the screen a message will indicate that your move has been recorded. The unit will now attempt to move to the designated square, taking several game minutes for each move. Please note that the computer only records the final position of the cursor, not the path you moved the cursor along. If you now move the purple cursor

back to the unit you just gave orders, and press the fire button, you should see the blue (white) X in the square you designated as the target. To give the unit new orders, move the joystick as before, the old orders will be automatically erased. To make the unit stop where it is, move the light blue cursor out, then move it back over the purple cursor and release the fire button.

The artillery units are different because there are two different types of orders that they can be given. They can be ordered to move to a square or they can be ordered to fire at a square. To move an artillery unit, move the purple cursor over it, press the fire button and wait for one second. After the one second, the light blue (white) X will appear and the light blue cursor can be moved like infantry or cavalry. To order the artillery unit to fire, press the fire button and within one second move the joystick. This maneuver will probably require a little practice. When you have moved the joystick within one second, you will have a yellow cursor. Move this cursor to the square that you wish the unit to fire at and then release the fire button. The artillery units can fire a distance of up to five squares. If you now move the purple cursor back to the artillery unit and press the fire button, you will see a dark yellow (white) X appear in the square the unit is firing at. Then after one second, the light blue (white) X will appear. Note that artillery units may not have both move and fire orders at the same time. If you order a unit to fire, it will erase the move orders and vice versa.

Once you have given orders to a unit, it will attempt to follow those orders. You are then free to give orders to other units. You can give orders to as many of your units as you like. The computer is simultaneously giving orders to the units it controls.

Unlike some other games you may have played, there are no turns or breaks in play. Once the game begins, it plays continuously until 9:00 pm, when the game is over. You are encouraged to give orders to each of your units before beginning the game. Then simply modify those orders as the situation changes. To begin the game, press START on the ATARI (f1 function key on the Commodore).

7) MOVEMENT

Although the playing area appears continuous, it is actually broken into squares, for movement purposes. Each square is the size of one unit symbol and is approximately 275 yards on a side. The length of time it takes a unit to move from one square to another depends on the type of unit and what kind of terrain the unit is entering. A list of

movement rates is given under 9) TERRAIN. For artillery units that had been firing, allow 5-15 minutes to hitch the guns to the wagons before the unit begins to move.

If a unit is moving along and encounters a friendly unit in its path (units cannot pass through one another) or a terrain feature which would slow it down, the unit will move one square to the side if such a move will avoid the obstacle. When a unit encounters an enemy unit directly in its path, it will attempt to dislodge that unit. See 8) COMBAT.

8) COMBAT

In Napoleon's era there were two basic methods of inflicting losses on your opponent. First, you could fire at him from a distance with muskets or cannon. Second, you could march right up to him and attempt to kill him with bayonets or sabers. This is known as hand-to-hand combat.

8.1) Fire Combat

8.1.1) Artillery Fire

The procedure for giving orders to the artillery units to fire has been discussed in 6) HOW TO GIVE ORDERS. The maximum range for artillery is five squares. However, an artillery unit's firepower is much greater at a distance of one square than at five squares. Also, when an artillery unit is first ordered to fire after moving, it will take several minutes to get the guns into position and begin to fire. Once an artillery unit begins firing, a dot will periodically move from the artillery unit to the square it is firing at. This should help to warn you if your units are moving into or near the target square. There is a small chance that the artillery fire will be inaccurate and hit a square next to the target square. Artillery units will continue to fire at their target square until their orders are changed or enemy units force them to retreat. For infantry or cavalry units that have guns, the fire from these guns is automatically controlled in the same manner as musket fire.

8.1.2) Musket Fire

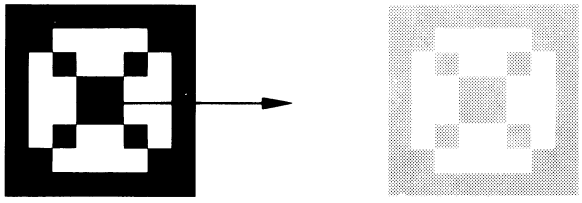
Only infantry units have the capability for musket fire. They can only fire at units that are adjacent. Musket fire is handled automatically by the computer and does not require direct action. Anytime an infantry unit is adjacent to one or more enemy units and does not have orders to move, the unit will fire at one of those enemy units, unless it is routed (see 10) MORALE). Musket fire is most commonly used by a

defending unit as it is attacked. However it is possible to use musket fire as part of an attack. Simply order your infantry to move to the square next to your target. Once your infantry has completed its move, it will look around, find the enemy unit and begin to fire. The only difficulty here is that the enemy, if stationary, will fire first.

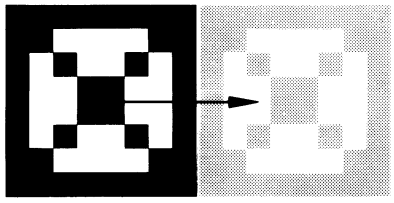
8.2) Hand to Hand Combat

Like musket fire, hand to hand combat is also controlled automatically by the computer. Whenever a infantry or cavalry unit is moving and finds an enemy unit in the square it is attempting to move into, it will attempt to engage that unit in hand to hand combat. If the moving unit is in a clear (or ridge) square, it will charge and so the combat will begin immediately. If the attacking unit is in a wooded or building square it cannot charge and it will be several minutes before it attempts to engage in hand to hand combat.

CHARGE IN OPEN TERRAIN



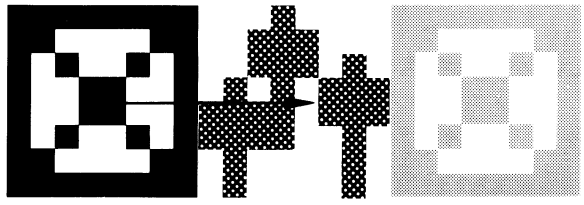
8 minutes to move adjacent



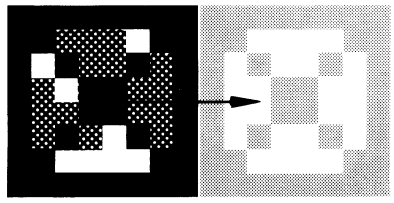
defending unit may fire once

1 minute to engage in hand to hand combat

NO CHARGE IN WOODS



15 minutes to move adjacent



defending unit may fire eight times

8 minutes to engage in hand to hand combat

All attempts at engaging in hand to hand combat are automatically successful unless the attacker is cavalry and the defender is infantry or the defending unit is in a walled farm square. In each attack, there is only a small chance of successfully engaging such a unit. If a defending infantry unit is disorganized or routed (see 10) MORALE) it may be freely attacked by cavalry. Once a unit, either attacking or defending becomes engaged in hand to hand combat it will remain locked in combat until it retreats, or all adjacent enemy units engaged in hand to hand combat (even those not originally attacked by that unit) have retreated. Once a unit is clear of enemy units, it will take ten minutes or so to get reorganized. During this entire time you may change a unit's orders, however it won't begin to act on them until it

has completed its reorganization.

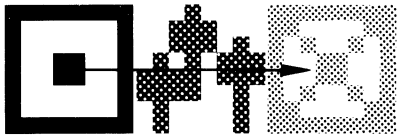
9) TERRAIN

Units move at different speeds depending on the type of unit and the terrain they are entering. A list of movement rates in minutes is given:

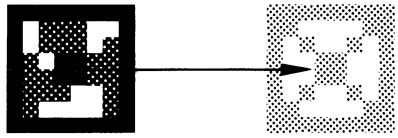
TERRAIN		INFANTRY	LT CAVALRY	HV CAVALRY	ARTILLERY
OPEN		8	5	6	8
RIDGE		8	5	6	8
WOODS		15	12	15	22
FARM		11	7	9	11
VILLAGE		11	7	9	11

For diagonal movement, increase the time given by about 50%.

Terrain also affects combat. Units in ridge,woods,village, or farm squares will suffer fewer casualties from musket and artillery fire than if they were in open squares. Additionally, artillery units firing through these terrains will have no effect.



BLOCKED



NOT BLOCKED

Note that artillery occupying any type of terrain may fire out of that terrain without impairment.

Terrain has no effect on hand to hand combat except for two instances. The first has to do with the length of time it takes units to become engaged. Hand to hand combat begins immediately after the attacking unit moves adjacent to an enemy unit if the attacker is in an open or ridge square. If the attacker is in another type of terrain use the movement chart to determine the delay before hand to hand combat begins. The other effect applies if the defending unit is in a walled farm. Each time an attack is launched against a walled farm there is only a small chance that the attackers will get inside to fight the defenders.

10) MORALE

The morale of French units is listed in the lower right corner of the unit display. Allied units also have morale, but it is not revealed. Possible listings are poor, fair, good, and high. There are several subdivisions within each of these listings. Different units have different morale ratings. At the beginning of the game, each unit is at its own maximum morale. Its morale will vary during the course of the game but will never be above this maximum. When a unit is adjacent to an enemy unit its morale is lowered. Enemy cavalry units lower morale most, then infantry, then artillery. The more adjacent enemy units, the more morale is lowered. Once away from the enemy units, morale goes back up. Taking casualties also lowers a unit's morale, the more casualties, the greater the loss. When morale is lowered due to casualties, it will gradually increase back to the maximum over a period of time.

Now for the significance of morale. First of all, the morale is an indicator of a unit's combat ability. The higher a unit's morale the stronger that unit's ability. Second, a unit that drops several notches down into the poor category becomes disorganized. Disorganization is indicated by having the second line of the unit display with inverse coloring (dark letters on a light background). Disorganized units have their combat ability reduced by half. If the morale drops a little more, the unit becomes routed. This is indicated by both lines of the unit display with inverse letters. Once a unit is routed, it will no longer take orders, and begins retreating. Normally, after some period of time, a routed unit will change to a disorganized unit. Disorganized units, if left with no orders, will eventually return to normal. Each time a unit is routed, its maximum morale is permanently reduced, increasing its chances of being routed again. If a unit is repeatedly routed, its morale may be lowered so far as to be in a permanent state of disorganization or rout. A unit's morale may even go low enough to cause it to disintegrate and dissappear from the map. Although the morale of the Allied armies is not shown, the conditions of disorganization and rout are shown.

11) ARMY DEMORALIZATION

During the course of the game there will be critical periods when large numbers of units become disorganized and routed. If the number of units in one of the three armies suffering these conditions exceeds a critical limit, the entire army becomes demoralized. When a particular army is demoralized, each unit in that army has its maximum morale lowered several notches. Routed units count more toward the

limit than disorganized units. In the French Army, units of the Imperial Guard count more than the regular troops.

When either the Anglo-Allied Army or Prussian Army is demoralized, the French anthem, "La Marseillaise" will play. When the French Army is demoralized, "God Save the Queen", the British anthem will play.

12) WINNING THE GAME

At 9:00 pm, the game is over and a message will inform you that you can get the score by pressing the OPTION key (f7 function key for Commodore). At the time the game ends, the national anthem of the winning side will be played. The score or casualty screen lists the number of killed and wounded for each army. The total score is listed at the bottom of the screen. The points required to win by scenario are:

Prussians Retire: 85,000

Historical: 100,000

Grouchy Marches to the Guns: 160,000

Prussians Evade Grouchy: 125,000

If your score is less than required, Napoleon goes back into exile. The total score is a base of 70,050 (106,000 on the third scenario), plus the Anglo-Allied casualties and minus the French casualties. In addition, for any of the three armies that were demoralized, the number of troops that deserted from that army is added or subtracted with the casualty figures.

13) PAUSING

If you have to take a break from NAPOLEON AT WATERLOO, press any key on the keyboard but BREAK (Commodore, press f3). To resume play, use the joystick or fire button.

Part II Advanced

1) STRATEGIC SITUATION

In March 1815, Napoleon escaped from exile on the island of Elba, off the coast of Italy. He triumphantly returned to Paris and began raising troops for the defense of France. Under the leadership of the British, the coalition that had defeated him the year before began organizing to do so again. By June, Napoleon faced great odds. The Anglo-Allied Army under Wellington and the Prussian Army under Blucher were in Belgium. Another corps of Prussians was in Luxemburg. A German army lay along the Rhine river. The Russians had an army moving through central Germany towards France. And finally, the Austrian Army was in north Italy. Napoleon knew he would have to defeat his opponents separately to succeed. But where to start? Moving down to Italy would leave all those other armies near Paris. He felt that there were too many troops near the Rhine to win a quick victory, so he chose to attack into Belgium. He thought he might be able to defeat the two armies separately. Besides, if he could defeat the British, the whole coalition might collapse.

Napoleon moved north and on June 16, the French Army ran into the Prussians. After a day of hard fighting, the Prussians were forced to retreat. Napoleon sent part of his army, under General Grouchy, after them while he prepared to attack the Anglo-Allied Army with the rest of his army. His attack was delayed by rain on the 17th. On the 18th, Napoleon prepared for battle. As he would discover, the Prussians had escaped their pursuers and were circling back to join the British.

2) THE SCENARIOS

Prussians Retire

This scenario is the way Napoleon thought it would be, just him and Wellington. Napoleon thought that the Prussians would continue to retreat toward Germany instead of circling back to help the British. This scenario might also have occurred if General Grouchy had caught up with the Prussians earlier and defeated them. Points required to win: 85,000.

Historical

In the real battle, General Grouchy assumed the Prussians were retreating toward Germany and headed in that

direction. He and his troops lost about a half-day's march before they realized that the Prussians had turned north. Grouchy caught up to the Prussians and attacked them in the early afternoon of the 18th, but two of the four Prussians corps were nearly to the battlefield with the third corps not far behind. Points required to win: 100,000.

Grouchy Marches to the Guns

Some historians argue that if General Grouchy had begun marching to the battlefield at 11:15 when he heard the cannon open fire that his troops would have turned the tide. The direct route from where Grouchy was on the morning of the 18th to the battlefield was through rough, wooded terrain. But he might have made it. You can see what happens if he did. Points required to win: 160,000.

Prussians Evade Grouchy

The worst possible outcome for Napoleon. If Grouchy had continued east a little longer, he would have missed the Prussians altogether. All four Prussian corps would have joined the battle and would not have been delayed by having to fight off their French pursuers. A very difficult situation indeed! Points required to win: 125,000.

3) STRATEGIC CONSIDERATIONS

While it is better to defeat both opposing armies, the Anglo-Allied Army under Wellington has to be considered the prime opponent. Wellington's army must not just be pushed from their initial positions, but must be demoralized. As mentioned earlier, if an army is demoralized, the deserters and stragglers of that army are added into the score along with the casualties. During an average game this will probably be worth an additional 20,000 points, usually the difference between winning and losing. Also, by demoralizing the Anglo-Allied Army, and thus lowering the morale of each of their units, they become so ineffective that you can devote your full attention to the Prussians.

4) RUNNING THE BATTLE

As you probably know, defeating the British involves more than hurling the French Army at them. Typically, only 4-8 units were used to attack at any one time. This fits in nicely with number of units that most players can competently handle. Each attack can be broken into several different actions.

1) Choose a part of the enemy to be attacked.

2) Move the attacking units into positions near the enemy.

3) Issue attack orders to your units.

4) Adjust your unit's orders as the attack procedes. Order your units to retreat if the attack seems to be failing. Or if it succeeds, move them forward.

5) NAPOLEONIC TACTICS

When faced with a major battle, Napoleon would generally choose the weakest portion of his enemy's line for his main attack. Sometimes he would launch a small attack at another point to try and trick his opponent into moving units from the area of the main attack. For the first part of the battle, Napoleon would have his artillery fire at the place of attack. This weakened the enemy by killing numbers of them and by lowering the morale of those not killed. Then he would send forward infantry units along with several cavalry units. This might be repeated a number of times. Finally, as both sides grew weary, Napoleon would send in his best troops, the Imperial Guard to win the day. After the enemy began to retreat, the cavalry was sent to chase them down.

5.1) ARTILLERY

As mentioned earlier artillery was used mostly before an attack. This was because of its long range, 1000-1500 yards. The projectile most commonly used was simply a round iron ball. It was much more more deadly than it might seem because the ball usually bounced a number of times and because the target generally consisted of several thousand men crowded together. At very close range the artillery would use something called case. Essentially it was a giant tin can filled with musket balls and transformed a cannon into a giant shotgun. Although this ammunition only had a range of a couple of hundred yards, it was quite deadly within that range.

A few tips:

1. Try to keep your units at least two squares away from the target square as sometimes the guns can miss.
2. Artillery are almost defenseless against hand to hand combat, so if you think your artillery is about to be attacked, have your artillery begin firing a distance of one square. This will give your artillery time to readjust its firing range

before the enemy actually attacks. This is very important because your artillery will only have one chance to fire at its most effective range.

5.2) INFANTRY

During Napoleon's era, the infantry fought with muskets which were only accurate to a hundred yards or so and could be fired about twice a minute. Mounted on the end was a bayonet which was used in hand to hand combat.

Two different formations were used during this period. The line formation, in which all the men were in a line two or three men deep facing the enemy. And the column, in which the men were arranged in a block, perhaps 100 across and 25 deep. The line allowed all the men to fire their weapons while the column tended to boost morale by giving a sense of security. The British, having fewer men, used the line formation to get the most firepower from them. At Waterloo, the French were formed into columns, which meant only about 1500 of the men in a unit were actively participating in combat. A variation of the line was the square. The infantry were arranged two or three deep in a square shape facing outward. This formation was nearly invulnerable to cavalry attacks.

When attacking with infantry against artillery or other infantry it is generally best to go in quickly and engage in hand to hand combat. Cavalry were armed only with sabers, therefore it makes more sense to move adjacent to them and stop, allowing the computer to direct your infantry unit's fire.

5.3) CAVALRY

There were two classes of cavalry during this period, light and heavy. Light was more common. It consisted of mounted troops armed with sabers. The heavy cavalry used the largest horses available. They carried larger weapons and some even wore iron breastplates. The heavy cavalry was slower, but more effective against both cavalry and infantry. Up close and one on one an infantryman was no match for a cavalryman. The problem was getting there. When faced with a cavalry attack, infantry would form into squares with each side of the square facing out. The men in the front row would plant their muskets against the ground with the bayonet pointing out. The horses refused to charge into this. Then the back row of infantry would fire at the cavalry. As long as the infantry didn't lose their nerve they were safe. The most effective use of cavalry was in combination with infantry. First send in the infantry. Then send the cavalry.

Just as the infantry arrives and disrupts the enemy's line, the cavalry would arrive and charge through the holes. It was said that no infantry in the world could withstand such an attack if properly timed.

If you move your attacking units so there is one square between them and their targets and both are in open terrain, timing is not so difficult. From the movement chart you can see that moving one square takes heavy cavalry two minutes less than infantry and light cavalry takes three less. So note the time on the clock, order your infantry forward, wait the appropriate time and send the cavalry in. For diagonal attacks, longer distances, and other terrain you will have to experiment some.

6) FINAL THOUGHTS

A few final pointers. Take time to get properly set for an attack. Try to outnumber the defenders. An unsuccessful attack costs time, costs points due to casualties, and worse, if a unit is routed, that unit's morale, and hence ability, is permanently lowered. It is generally not a good idea to use disorganized units. With their combat ability halved, they won't help much anyway. Let them sit until they recover.

As you play the game, Try to think of the units not simply as blue, red, or brown (green) squares on a screen. Try to imagine long lines of horseman charging with sabers. Men dressed in red armed with muskets in a long row, or formed into squares, waiting for the cavalry to attack. I think this will not only add to your enjoyment, but improve your understanding of what the game is supposed to recreate.

7) DESIGNER'S NOTES

Military simulations have two levels of realism. The first is relatively easy to recreate and deals with how fast the units move, the number of casualties a unit suffers in a given attack, etc. The second level is, I feel, more important. This is, how well the game gives an impression of what it might have been like to be a commander. Does it allow you to learn the tactics of the period? Does it create the same pressures to act with incomplete information or without being able to thoroughly plan each move? I think that NAPOLEON AT WATERLOO largely succeeds. The only regret I have is that all the effects that the program considers, such as line and square formations and whether a unit is engaged in hand to hand combat are not depicted with graphics on the display. Unfortunately, this had to be omitted in order to hold down the memory requirements.

I am quite pleased with the order entry system. Once you've pressed the START button, only the joystick and fire button is required. I borrowed the idea of the self-centering cursor from Rome and the Barbarians, but I decided to try a system based on specifying the unit's destination rather than its path. This sacrifices some of a player's options, but it simplifies the task of issuing orders considerably.

When I set out to design NAPOLEON AT WATERLOO, I wanted to develop a game that was short, realistic, relatively uncomplicated, and fun to play. I hope you find that the game succeeds. Please send any comments or questions to me, Steve Krenek, at:

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